

**JAPANESE SAWFLIES OF THE *JAPONICUS* GROUP OF THE GENUS
TAXONUS HARTIG (HYMENOPTERA: TENTHREDINIDAE)**

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Abstract.—*Taxonus hakusanus*, n. sp., *T. albiventris*, n. sp., *T. shiritakanus*, n. sp., *T. fulvipes*, n. sp., *T. serratus*, n. sp., and *T. tsunekii*, n. sp., from Japan are described and illustrated. A key is given for the 12 species of the *japonicus* group in Japan.

Key Words: Tenthredinidae, Allantinae, *Taxonus*, new species, Japan

In 1992, I studied the genus *Taxonus* Hartig in Japan and divided it into the *nigromaculatus*, *agrorum*, and *japonicus* groups by the coloration of the body or the labrum. In the same paper, I revised the species of the *nigromaculatus* and *agrorum* groups. In this paper, I treat the 12 species of the *japonicus* group from Japan, six of which are new.

All types are deposited in the collection of the National Science Museum (Natural History), Tokyo (NSMT), and some paratypes are deposited the National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM).

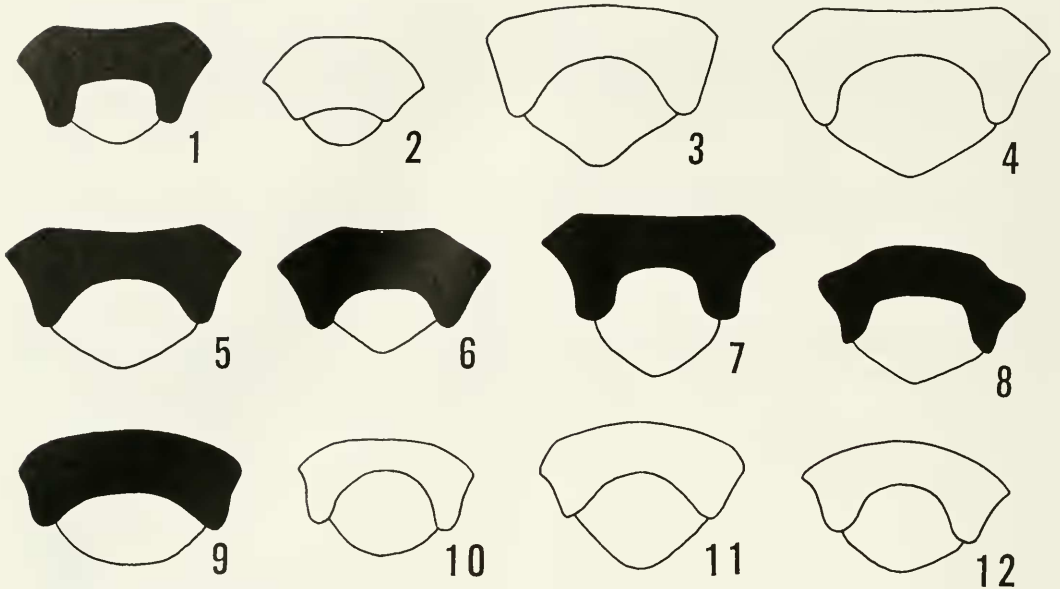
THE *JAPONICUS* Group

Head and body black, but labrum milky white; antenna black but sometimes apical three segments milky white or 4th and 5th antennal segments milky white; legs black but sometimes coxae, trochanters or hind tarsal segments milky white, or hind tibia fulvous.

KEY TO THE SPECIES OF THE *JAPONICUS*
GROUP IN JAPAN

- 1. Female 2
- Male 13
- 2. Apical 3 or 4 antennal segments black or 4th and 5th antennal segments black 3

- Apical 3 or 4 antennal segments, or 4th and 5th antennal segments milky white 5
- 3. Clypeus black; posterior margin of pronotum and tegula yellowish white; central portion of 3rd to 6th abdominal tergites fulvous (anterior margin of clypeus rather quadrately emarginate, lateral lobe rather elongate (Fig. 1); sawsheath as in Fig. 28) *delumbis* Konow
- Clypeus milky white; pronotum black; abdominal tergites black 4
- 4. Tegula and last abdominal tergite milky white; metepimeron black with a small white macula (Fig. 13); anterior margin of clypeus slightly emarginate (Fig. 2); sawsheath as in Fig. 29; serrulae of lancet as in Fig. 40 *hakusanus*, n. sp.
- Tegula, metepimeron, and last abdominal tergite black; anterior margin of clypeus strongly emarginate, lateral lobe rather triangular (Fig. 3); sawsheath as in Fig. 30; serrulae of lancet as in Fig. 41 *japonicus* Takeuchi
- 5. Apical 3 or 4 antennal segments milky white 6
- Apical 3 or 4 antennal segments black; 4th and 5th antennal segments milky white *hirasanus* (Takeuchi)
- 6. Clypeus black 7
- Clypeus milky white 11
- 7. Mesoscutellum black with a small milky white macula; last abdominal tergite milky white 8
- Mesoscutellum and last abdominal tergite black 9
- 8. All sternites milky white; apical 4 tarsal segments milky white; apical margin of clypeus semicircularly emarginate, lateral lobe rather short and triangular in form (Fig. 5); saw-



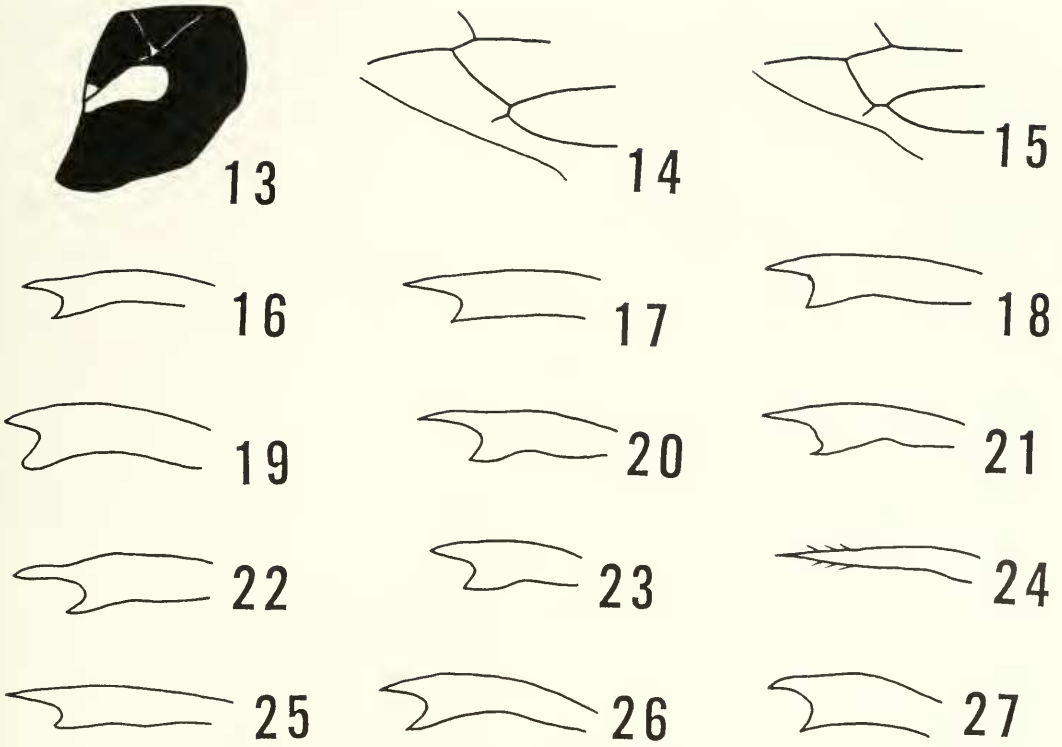
Figs. 1-12. Clypeus and labrum, front view. 1, *Taxonus delumbis*. 2, *T. hakusanus*. 3, *T. japonicus*. 4, *T. hirasanus*. 5, *T. albiventris*. 6, *T. shiritakanus*. 7, *T. fulvipes*. 8, *T. tenuicornis*. 9, *T. serratus*. 10, *T. bellus*. 11, *T. autumnalis*. 12, *T. tsunekii*.

- sheath as in Fig. 32; serrulae of lancet as in Fig. 42 *albiventris*, n. sp.
- Posterior half of all sternites white with triangular yellowish brown maculae; apical 4 tarsal segments black; apical margin of clypeus rather shallowly emarginate, lateral lobe triangular in form (Fig. 6); sawsheath as in Fig. 33; serrulae of lancet as in Fig. 43 *shiritakanus*, n. sp.
- 9. Tegula and abdominal tergites black 10
- Outer side of tegula yellowish brown; last abdominal tergite milky white (all femora, tibiae and tarsi fulvous but apical portion of hind femur black; anterior margin of clypeus rather quadrately emarginate (Fig. 7); sawsheath as in Fig. 34; serrulae of lancet as in Fig. 44) *fulvipes*, n. sp.
- 10. Anterior margin of clypeus rather quadrately emarginate, lateral lobe rather triangular in form (Fig. 8); sawsheath as in Fig. 35; serrulae of lancet as in Fig. 45 *tenuicornis* (Takeuchi)
- Anterior margin of clypeus slightly emarginate (Fig. 9); sawsheath as in Fig. 36; serrulae of lancet as in Fig. 46 *serratus*, n. sp.
- 11. Tegula and last abdominal tergite milky white; all sternites black 12
- Tegula and last abdominal tergite black; all sternites yellow (anterior margin of clypeus rather quadrately emarginate, lateral lobe elongate (Fig. 10); sawsheath as in Fig. 37; serrulae of lancet as in Fig. 47) *bellus* (Takeuchi)
- 12. Lateral side of 1st abdominal tergite and anterior half of lateral side of 2nd abdominal tergite milky white; basal half of hind tibia milky white; anterior margin of clypeus emarginate (Fig. 11); sawsheath as in Fig. 38; serrulae as in Fig. 48 *autumnalis* (Takeuchi)
- First and 2nd abdominal tergites entirely black; hind tibia pale fulvous; anterior margin of clypeus rather semicircularly emarginate (Fig. 12); sawsheath as in Fig. 39; serrulae as in Fig. 49 *tsunekii*, n. sp.
- 13. Clypeus black; costa of forewing dark brown; parapenis and penis valve as in Figs. 50 and 51 *shiritakanus*, n. sp.
- Clypeus milky white; costa of forewing pale reddish yellow 14
- 14. Hind femur pale brown; apical 4 segments of hind tarsus dark brown; parapenis and penis valve as in Figs. 52 and 53 *fulvipes*, n. sp.
- Hind femur black; apical 4 segments of hind tarsus dirty white; parapenis and penis valve as in Figs. 54 and 55 *tsunekii*, n. sp.

***Taxonus hakusanus* Togashi,
new species**

(Figs. 2, 13, 15, 17, 29, 40)

Female.—Length 8–8.5 mm. Black with following parts milky white to yellowish



Figs. 13-27. 13, Mesopleuron of *Taxonus hakusanus*. 14-15, Anal cell of hindwing. 14, Sessile anal cell of *T. autumnalis*. 15, Petiolate anal cell of *T. tenuicornis*. 16-27, Fore inner tibial spur. 16, *T. delumbis*. 17, *T. hakusanus*. 18, *T. japonicus*. 19, *T. hirasanus*. 20, *T. albiventris*. 21, *T. shiritakanus*. 22, *T. fulvipes*. 23, *T. tenuicornis*. 24, *T. serratus*. 25, *T. bellus*. 26, *T. autumnalis*. 27, *T. tsunekii*.

white: clypeus, small spot on latero-posterior corner of pronotum, tegula, cenchrus, triangular macula on mesepisternum (Fig. 13), posterior margin of 1st tergite, posterior margin of 2nd to 5th tergites except for lateral side (sometimes 2nd and 5th tergites black), central portion of 9th tergite, 2nd to 6th sternites and lateral side of 7th sternite. Antenna black. Wings hyaline; costa and apical portion of subcosta of forewing pale yellow, other veins and stigma dark brown to black. Legs yellowish white with following parts dark brown to black: outer side of apical portion of mid femur, inner side of mid tibia, mid tarsus, apical half of hind femur, hind tibia except for basal $\frac{1}{4}$, and hind tarsus.

Head: Transverse, slightly narrowed behind eyes; OOL:POL = 2.0-2.5:1.0; interocellar furrow sharp and deep; postocellar

furrow rather indistinct; lateral furrows distinct and deep; postocellar area nearly quadrate, convex; frontal area slightly convex; median fovea distinct and deep, circular in outline; lateral fovea distinct, with a conical like projection in middle; antenno-ocular distance shorter than distance between antennal sockets (ratio about 1.0:1.4-1.5); anterior margin of clypeus slightly emarginate (Fig. 2); labrum rather small; malar space nearly as long as diameter of front ocellus.

Antenna slightly longer than costa of forewing (ratio about 1.0:0.9-1.0); relative lengths of segments about 1.7:1.0:5.2:4.5:4.5:2.6:2.5:2.2:2.3; pedicel slightly longer than width (ratio about 1.0:0.9).

Thorax: Normal; cenchrus rather small, distance between cenchri slightly longer than breadth of one (ratio about 1.0:1.1-

1.3); mesoscutellum nearly flattened. Wings: anal cell of hindwing with short petiole (Fig. 15). Legs: hind basitarsus slightly shorter than following 4 segments combined (ratio about 1.0:1.1); fore inner tibial spur as in Fig. 17.

Abdomen: Normal; sawsheath as in Fig. 29; 10th to 12th serrulae of lancet as in Fig. 40.

Punctuation: Head and thorax covered with fine setigerous punctures; posterior portion of mesoscutellum distinctly and rather closely punctured, interspaces between punctures nearly impunctate, shining; posttergite practically impunctate, shining; abdominal tergites shagreened.

Male.—Unknown.

Distribution.—Japan (Honshu).

Holotype.—♀, 4. IX. 1988, Mt. Hakusan (alt. about 1300 m), Ishikawa Pref., I. Togashi leg. (NSMT).

Paratypes.—1 ♀, 13. VI. 1975, Mt. Hakusan, Ishikawa Pref., I. Togashi leg. (NSMT); 1 ♀, 23. V. 1998, Mt. Hakusan (alt. 1,500–1,700 m), Ishikawa Pref., I. Togashi leg. (USNM).

Remarks.—This new species is close to *T. japonicus*, but it is easily distinguished from the latter by the whitish coloration of the tegula, mesopleuron and 2nd to 6th sternites (in *japonicus*, the tegula, mesopleuron and 2nd to 6th sternites are black), by the shape of the clypeus (in *japonicus*, the anterior margin of the clypeus is distinctly emarginate, see Figs. 2 and 3), and by the structure of the lancet (see Figs. 40 and 41).

***Taxonus albiventris* Togashi, new species**
(Figs. 5, 14, 20, 32, 42)

Female.—Length 9–10 mm. Black with following parts milky white: labrum, all palpi, cenchrus, 2nd to 6th sternites. Antenna black but apical 3 segments milky white. Wings hyaline; costa and basal half of stigma of forewing pale yellowish white; other veins dark brown to black. Legs black with following parts milky white: dorsal side of mid coxa, hind coxa, all trochanters, and hind tarsus except for basitarsus and basal

half of 2nd segment; knee of fore femur, fore tibia and tarsus, mid tibia, hind tibia except for underside and apical portion dark reddish brown.

Head: Transverse, postocellar area rather pentagonal; OOL: POL = 2.2–2.4:1.0; interocellar furrow distinct; postocellar furrow rather distinct; lateral furrows distinct and deep; frontal area slightly concave; median fovea deep, circular in outline; lateral fovea distinct and rather elongate, upper and under side distinctly pitted, and with a conical like projection in middle of upper pit; antenno-ocular distance shorter than distance between antennal sockets (ratio about 0.8:1.0); malar space as long as diameter of front ocellus; clypeus strongly emarginate (Fig. 5).

Antenna slightly longer than costa of forewing (ratio about 1.0:0.9); relative lengths of segments about 1.6:1.0:4.2:3.8:3.3:2.3:1.7:1.7:1.8; pedicel longer than width (ratio about 1.0:0.6).

Thorax: Normal; mesoscutellum slightly convex; cenchrus rather large, distance between cenchri longer than breadth of one (ratio about 1.3:1.0). Wings: anal cell of hindwing sessile (Fig. 14). Legs: hind basitarsus shorter than following 4 segments combined (ratio about 1.0:1.1); fore inner tibial spur as in Fig. 20.

Abdomen: Normal; sawsheath as in Fig. 32; 10th to 12th serrulae of lancet as in Fig. 42.

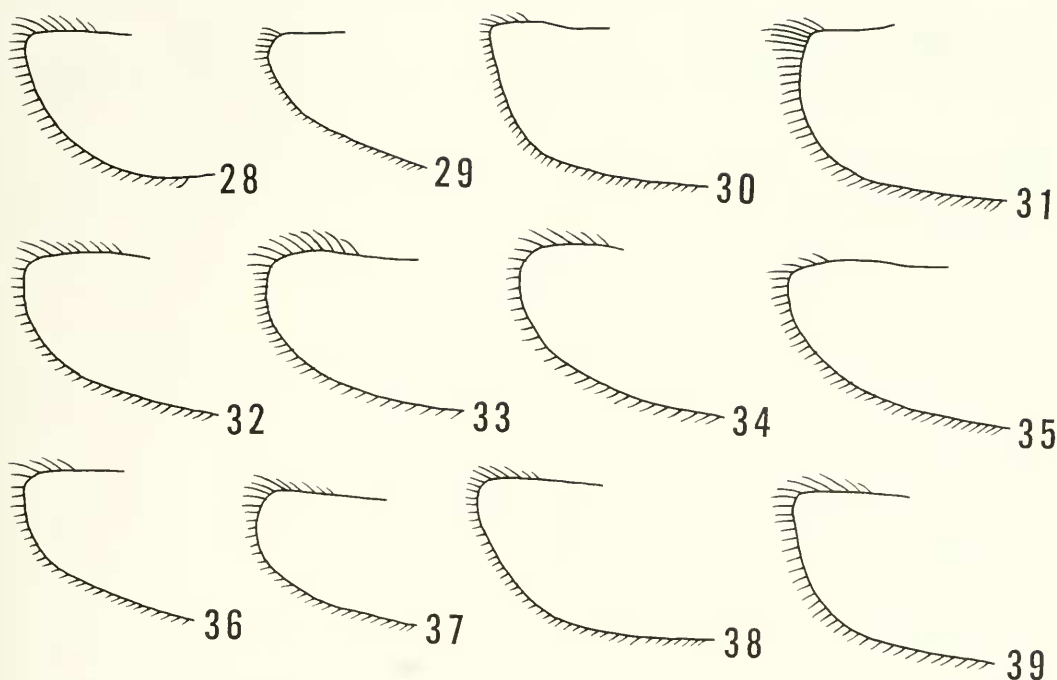
Punctuation: Head and thorax covered with fine setigerous punctures; clypeus and pronotum distinctly and rather reticulately punctured; mesoscutellum distinctly punctured, interspaces between them nearly impunctate; posttergite practically impunctate, shining; abdominal tergites shagreened.

Male.—Unknown.

Distribution.—Japan (Honshu).

Holotype.—♀, 8. VI. 1980, Chugu Spa, foot of Mt. Hakusan, Ishikawa Pref., I. Togashi leg. (NSMT).

Paratypes.—1 ♀, 23. V. 1971, Mt. Shiritaka, Ishikawa Pref., I. Togashi leg. (NSMT); 1 ♀, 16. VII. 1975, Chugu Spa,



Figs. 28–39. Female sawsheath, lateral view. 28, *Taxonus delumbis*. 29, *T. hakusanus*. 30, *T. japonicus*. 31, *T. hirasanus*. 32, *T. albiventris*. 33, *T. shiritakanus*. 34, *T. fulvipes*. 35, *T. tenuicornis*. 36, *T. serratus*. 37, *T. bellus*. 38, *T. autumnalis*. 39, *T. tsunekii*.

foot of Mt. Hakusan, Ishikawa Pref., I. Togashi leg. (USNM).

Remarks.—This new species is closely allied to *T. shiritakanus*, but it is easily separable from the latter by the shape of the clypeus (see Figs. 5 and 6), by the shape of the sawsheath (see Figs. 32 and 33), and by the shape of the lancet (see Figs. 43 and 44). From *T. hakusanus*, it is distinguished from the coloration of the clypeus and tegula (in *hakusanus*, the clypeus and tegula are milky white).

***Taxonus shiritakanus* Togashi,
new species**

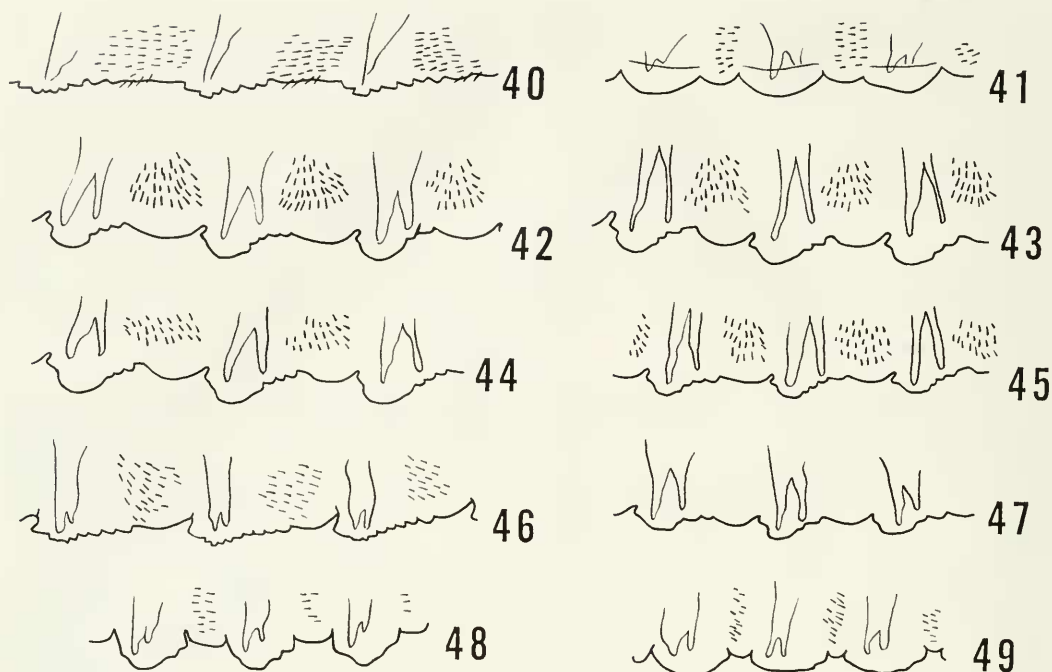
(Figs. 6, 21, 33, 43, 50, 51)

Female.—Length 8 mm. Black with following parts milky white: labrum, cenchrus, last tergite, 2nd to 4th sternites, apical triangular spot on 5th and 6th sternites, sometimes small milky white macula on mesoscutellum. Antenna black but apical portion of 6th joint and apical 3 joints milky white,

apical portion of last joint darker. Wings hyaline; costa and basal $\frac{1}{3}$ of stigma of forewing pale yellow; other veins dark brown to black. Legs black with following parts milky white: mid coxa except for basal half of under side, hind coxa, and all trochanters; front tibia and tarsus dark reddish brown.

Head: Transverse, slightly narrowed behind eyes; postocellar area subquadrate; interocellar furrow distinct; postocellar furrow rather ill-defined; lateral furrows distinct; OOL:POL = 3.0:1.0; frontal area nearly flattened; median fovea distinct, circular in outline; lateral fovea distinct, circular in outline; antenno-ocular distance shorter than distance between antennal sockets (ratio about 1.0:1.8); anterior margin of clypeus emarginate (Fig. 6); malar space short, nearly $\frac{1}{2}$ as long as diameter of front ocellus.

Antenna slightly longer than costa of forewing (ratio about 1.0:0.8); relative



Figs. 40–49. Tenth to 12th serrulae of female lancet. 40, *Taxonus hakusanus*. 41, *T. japonicus*. 42, *T. albiventris*. 43, *T. shiritakanus*. 44, *T. fulvipes*. 45, *T. tenuicornis*. 46, *T. serratus*. 47, *T. bellus*. 48, *T. autumnalis*. 49, *T. tsunekii*.

lengths of segments about 1.5:1.0:4.0:3.3:2.3:2.0:1.8:1.6:1.8; pedicel slightly longer than width (ratio between length and width about 1.0:0.6).

Thorax: Normal; mesoscutellum slightly raised; cenchrus nearly as long as distance between them. Wings: anal cell of hindwing sessile (Fig. 14). Legs: hind basitarsus nearly as long as following 4 segments combined; fore inner tibial spur as in Fig. 21.

Abdomen: Normal; sawsheath as in Fig. 33; 10th to 12th serrulae of lancet as in Fig. 43.

Punctuation: Head and thorax covered with fine setigerous punctures; clypeus, posterior half of mesoscutellum and upper half of mesepisternum distinctly and rather reticulately punctured, interspaces between punctures narrowed; posttergite practically impunctate, shining; abdominal tergites shagreened.

Male.—Similar to those female, but parapenis and penis valve as in Figs. 50 and 51.

Distribution.—Japan (Honshu).

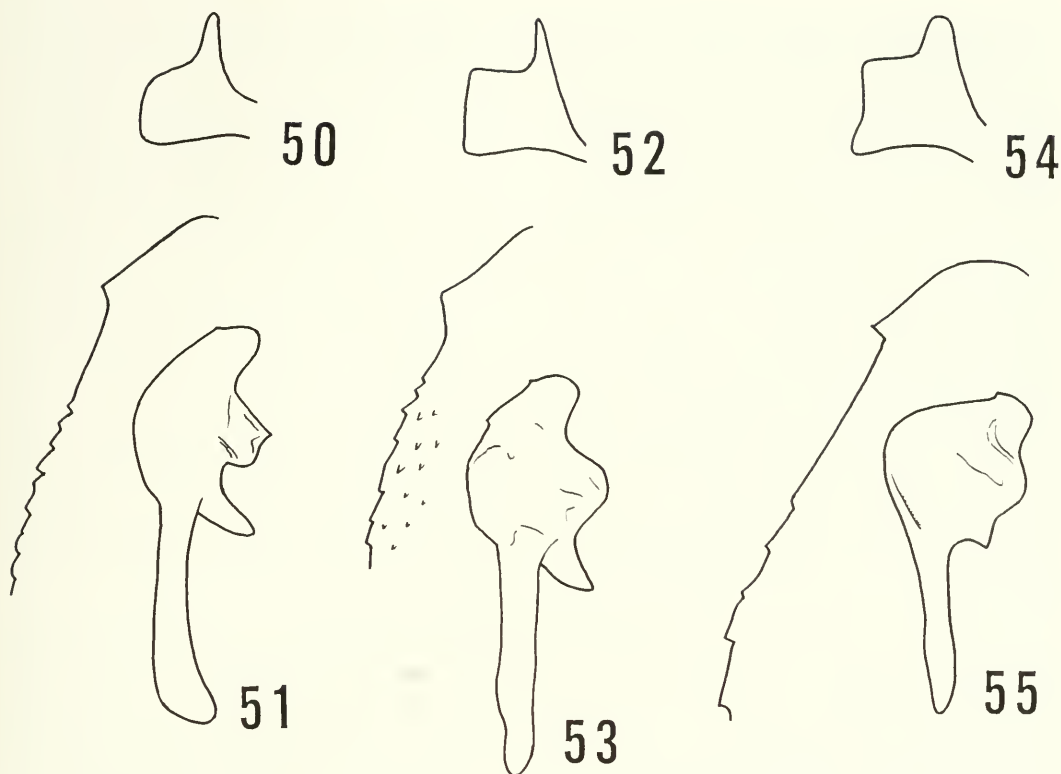
Holotype.—♀, 15. IX. 1988, Mt. Shiritaka, Ishikawa Pref., I. Togashi leg. (NSMT).

Paratypes.—1 ♀ and 1 ♂, 15. IX. 1988, Mt. Shiritaka, Ishikawa Pref., I. Togashi leg. (NSMT).

Remarks.—This new species is closely allied to *T. albiventris*, but it is easily separable from the latter by the shape of the clypeus (see Figs. 5 and 7), by the length of the malar space (in *albiventris*, the malar space is as long as the diameter of the front ocellus), and by the shape of the lancet (see Figs. 43 and 44).

***Taxonus fulvipes* Togashi, new species**
(Figs. 7, 22, 34, 44, 52, 53)

Female.—Length 10–11 mm. Black with following parts milky white: labrum, small spot of outer side of basal half of mandible, cenchrus, central portion of 8th and 9th tergites. Second to 6th sternites reddish yellow. Tegula reddish brown. Antenna black



Figs. 50–55. Male genitalia. 50, 52, 54, Parapenis. 51, 53, 55, penis valve. 50–51, *Taxonus shiritakauus*. 52–53, *T. fulvipes*. 54–55, *T. tsunekii*.

but apical $\frac{1}{3}$ of 6th segment and apical 3 segments milky white. Wings hyaline; costa, outer half of subcosta and basal half of stigma of forewing reddish yellow, other veins dark brown or black. Legs reddish yellow; fore coxa black; mid coxa milky white but outer side black; hind coxa milky white; all trochanters milky white.

Head: Transverse; postocellar area rather pentagonal; OOL:POL = 2.5:1.0; interocellar and postocellar furrows distinct; lateral furrows distinct and deep; frontal area slightly concave; median fovea deep, circular in outline; lateral fovea distinct and deep, with a conical like projection in middle; antenno-ocular distance shorter than distance between antennal sockets (ratio about 0.6:1.0); anterior margin of clypeus distinctly emarginate (Fig. 7); malar space short, $\frac{1}{2}$ as long as a diameter of front ocellus.

Antenna slightly longer than costa of forewing (ratio about 1.0:0.9); relative lengths of segments about 1.5:1.0:5.0:4.3:3.6:2.6:2.1:2.0:2.1; pedicel slightly longer than width (ratio between length and width about 1.0:0.6–0.7).

Thorax: Normal; mesoscutellum slightly convex. Cenchrus rather large, distance between cenchri slightly longer than breadth of one (ratio about 1.2–1.3:1.0). Wings: anal cell of hindwing sessile (Fig. 14). Legs: hind basitarsus shorter than following 4 segments combined (ratio about 1.0:1.3–1.4); fore inner tibial spur as in Fig. 22.

Abdomen: Normal; sawsheath as in Fig. 34; 10th to 12th serrulae of lancet as in Fig. 44.

Punctation: Head and thorax covered with fine setigerous punctures; clypeus distinctly and rather reticulately punctured, interspaces between punctures nearly im-

punctate; mesoscutellum distinctly and rather reticulately punctured, interspaces between punctures nearly impunctate but anterior half covered with fine setigerous punctures; upper half of mesepisternum distinctly and closely punctured; metascutellum and posttergite practically impunctate, shining. Abdominal tergites covered with fine setigerous punctures.

Male.—Length 9 mm. Coloration and structure similar to those of female but central portion of 3rd to 5th abdominal tergites reddish brown, 2 small maculae on 6th and 7th tergites reddish brown. Parapenis and penis valve as in Figs. 52 and 53.

Distribution.—Japan (Honshu).

Holotype.—♀, 20. V. 1990, Hikagezawa, Mt. Takao, Tokyo Pref., A. Shinohara leg. (NSMT).

Paratypes.—1 ♀, 1 ♂, 20. V. 1990, Hikagezawa, Mt. Takao, Tokyo Pref., A. Shinohara leg. (NSMT).

Remarks.—This new species is closely allied to *T. tenuicornis*, but it is easily separable from the latter by the shape of the sawsheath (see Figs. 34 and 35), by the shape of the serrulae of the lancet (see Figs. 44 and 45), and by the coloration of the legs (in *tenuicornis*, the legs are dark brown to black except for the milky white hind trochanters and the basal portion of the hind femur).

***Taxonus serratus* Togashi, new species**
(Figs. 9, 24, 36, 46)

Female.—Length 10 mm. Black with following parts milky white: labrum, basal half of lateral side of 2nd tergite, and small spot of lateral side of 3rd tergite. Antenna black; apical $\frac{2}{3}$ of 7th segment and apical 2 segments milky white. Wings hyaline; veins and stigma dark brown. Legs black; knee of fore femur reddish yellow; fore tibia and tarsus yellow; mid tibia and tarsus brownish black; apical 3 tarsal segments paler; hind coxa, trochanter and basal portion of femur milky white; basal ring of hind basitarsus and 2nd tarsal segment, apical portion of 2nd tarsal segment, 3rd and

4th tarsal segments milky white; last tarsal segment rather brown.

Head: Transverse; postocellar area slightly convex, nearly quadrate; OOL:POL = 3.0:1.0; interocellar and lateral furrows distinct; postocellar furrow rather ill-defined; frontal area nearly flattened; median fovea deep, circular in outline; lateral fovea deep, circular in outline; antenno-ocular distance nearly as long as distance between antennal sockets; malar space short, $\frac{1}{2}$ as long as diameter of front ocellus.

Antenna longer than costa of forewing (ratio about 1.0:0.8); relative lengths of segments about 2.5:1.0:7.0:7.0:6.0:4.5:4.0:4.0:4.0; pedicel slightly shorter than width (ratio between length and width about 1.0:1.2).

Thorax: Normal; mesoscutellum nearly flattened; cenchrus small, distance between cenchri longer than breadth of one (ratio about 1.6:1.0). Wings: anal cell of hindwing sessile (Fig. 14). Legs: hind basitarsus nearly as long as following 4 segments combined; fore inner tibial spur as in Fig. 24.

Abdomen: Normal; sawsheath as in Fig. 36; 10th to 12th serrulae of lancet as in Fig. 46.

Punctation: Head and thorax covered with fine setigerous punctures; supraclypeal area and clypeus minutely, densely punctured, matt; mesoscutellum finely and sparsely punctured but posterior half minutely and densely punctured; posttergite practically impunctate, shining; metapostnotum and abdominal tergites shagreened.

Male.—Unknown.

Distribution.—Japan (Honshu).

Holotype.—♀, 27. V. 1988, Mt. Shiritaka, Ishikawa Pref., I. Togashi leg. (NSMT).

Remarks.—This new species is closely allied to *T. tenuicornis*, but it is easily distinguished from the latter by the coloration of the stigma of the forewing (in *tenuicornis*, the basal $\frac{1}{3}$ of the stigma of the forewing is yellowish white), by the shape of the clypeus (in *tenuicornis*, the anterior margin of the clypeus is deeply emarginate,

see Figs. 8 and 9), by the shape of the sawsheath (see Figs. 35 and 36), and by the shape of the lancet (see Figs. 45 and 46).

***Taxonus tsunekii* Togashi, new species**
(Figs. 12, 27, 39, 49, 54, 55)

Female.—Length 9 mm. Black with following parts milky white: clypeus, labrum, macula on outer side of mandible, mesoscutellum, posterior $\frac{2}{3}$ of 8th tergite, 9th tergite and 4th to 7th sternites; tegula pale reddish brown. Antenna black but apical 3 segments milky white. Wings hyaline; costa and basal half of stigma of forewing pale reddish yellow; other veins and apical half of stigma dark brown to black. Legs pale reddish yellow with following parts black: fore coxa and femur (sometimes basal half reddish yellow), mid coxa and femur, apical half of hind femur, apical portion of hind tibia, and hind basitarsus; apical 4 tarsal segments milky white.

Head: Transverse; postocellar area rather quadrate; interocellar furrow distinct and deep; postocellar furrow distinct; lateral furrows distinct and deep; OOL:POL = 1.9–2.3:1.0; frontal area nearly flattened; median fovea distinct and deep, circular in outline; lateral fovea deep, rather circular in outline; antenno-ocular distance nearly as long as or slightly shorter than distance between antennal sockets (ratio about 1.0:1.0–1.1); anterior margin of clypeus distinctly emarginate (Fig. 12); malar space short, $\frac{1}{2}$ as long as diameter of front ocellus.

Antenna slightly longer than costa of forewing (ratio about 1.0:0.9); relative lengths of segments about 2.0:1.0:4.8:4.0:3.6:3.0:2.4:2.2:2.6; pedicel nearly quadrate (ratio between length and width about 1.0:1.0).

Thorax: Normal; mesoscutellum slightly convex; cenchrus small, distance between cenchri longer than breadth of one (ratio about 1.6–1.8:1.0). Wings: anal cell of

hindwing sessile (Fig. 14). Legs: hind basitarsus slightly shorter than following 4 segments combined (ratio about 1.0:1.1); fore inner tibial spur as in Fig. 27.

Abdomen: Normal; sawsheath as in Fig. 39; 10th to 12th serrulae of lancet as in Fig. 49.

Punctuation: Head and thorax covered with fine setigerous punctures; but clypeus and mesoscutellum distinctly, shallowly and sparsely punctured; posterior portion of mesoscutellum largely and distinctly punctured; posttergite and metapostnotum practically impunctate, shining.

Male.—Length 7 mm. Coloration and structure similar to those of female. Parapenis and penis valve as in Figs. 54 and 55.

Holotype.—♀, 2–5. VIII. 1974, Denzuku Path, Yamanashi Pref., K. Tsuneki leg. (NSMT).

Paratypes.—1 ♀, 9. VIII. 1955, Mt. Hakusan, Ishikawa Pref., I. Togashi leg. (USNM); 1 ♂, 3. VIII. 1968, Kitazawa Path, Yamanashi Pref., R. Inomata leg. (NSMT).

Remarks.—This new species closely resembles *T. autumnalis*, but it is easily separable from the latter by the coloration of the hind tibia (in *autumnalis*, the hind tibia is black), and by the shape of the sawsheath and 10th and 12th serrula of the lancet (see Figs. 38, 39, 48 and 49).

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LITERATURE CITED

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